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Managing Director*

March 28, 2008

Dr. Russell Read
Chief Investment Officer
California Public Employees' Retirement System
400 Q Street
Sacramento, CA 95814

Re: Revision of the Asset Allocation Strategy Policy

Dear Russell,

You requested Wilshire's opinion with respect to Staff's proposed changes to the Asset Allocation Strategy Policy. The revised Policy incorporates the new asset class targets that were set by the Investment Committee after the Asset Allocation Workshop. Additionally, Staff is requesting greater latitude in its ability to actively manage the actual asset class allocations within the target ranges.

Recommendation

Wilshire recommends that the Policy Subcommittee approve the revised policy, although the Investment Committee should be cognizant of the potential risks and rewards that would be associated with a greater amount of flexibility in actively managing the actual asset class allocations within the target ranges, as delineated below.

Background and Supporting Information

The first significant change in the proposed revision simply adds the target asset class allocations to reflect the targets that were adopted as a result of the Asset Allocation Workshop. In addition, Staff has added proposed ranges for each asset class and for Total Equity (the combination of Global Equity and AIM) and for the combination of Global Fixed Income and ILAC. Wilshire believes that the ranges are appropriate, allowing sufficient flexibility for asset classes to drift away from their targets due to performance differences without forcing CalPERS to incur transaction costs to rebalance for only minor variances.

The second significant change would allow Staff greater flexibility in using the tolerance ranges for each asset class. In the current policy, if an asset class violates its upper limit, Staff can rebalance the allocation to the asset class such that the amount invested falls anywhere between the upper limit and the target allocation (the converse is true for lower limit violations). So, in this example, Staff currently has the ability to maintain a reduced overweight to this asset class or to move it back to its target. However, Staff is requesting the ability to alter the allocations to Global Equity and Global Fixed Income

on their own by up to 5% in a given quarter. This would give Staff the ability to move from a modest overweight to a modest underweight during a given quarter, based on Staff's views (or an outside manager's views) of the various markets.

There are several factors that limit the risk associated with this active management of the asset allocation. First, AIM, Real Estate, and ILAC are largely comprised of illiquid securities that do not have the intra-quarter volatility of the publicly traded securities that comprise the Global Equity and Global Fixed Income universes. Given that 25% of CalPERS' portfolio is targeted to be invested in these asset classes, only 75% is subject to daily pricing (ignoring the small REIT allocation within Real Estate), and thus, subject to meaningful and timely active management decisions. Also, AIM and ILAC get "rolled up" into larger components (Total Equity and Global Fixed Income + ILAC) which have their own tolerance bands. This could also act to dampen the active weights of the asset classes.

Second, Staff is proposing a tracking error target for both the active asset allocation decisions (limited to 75 basis points on a forecasted basis) and for the total fund (limited to 150 basis points on a forecasted basis). The limitation on the forecasted tracking error for the total fund includes any forecasted tracking error from any active asset allocation decisions, as well as all the active managers and investment programs. By way of comparison, the PERF's actual tracking error over the 5 year period ending December 31, 2007 was 60 basis points, including any actual active allocation weights. However, this likely understates the future tracking error as the last five years have been remarkably docile from a risk standpoint and the PERF has received recent increases to higher tracking error programs (the increased allocations to AIM, Real Estate, ILAC, RMARS and Corporate Governance being examples from the past 8 months or so). So, both limits will act as governors on the amount of tracking error that the active asset allocation decision can add. However, at either upper limit, this would be an increase over what the PERF has experienced over the past five years.

To find an extreme case of how actively managing the asset allocation might have added value, Wilshire analyzed the quarterly performance of the broad, long-duration bond market and the global stock market over the past 20 years. Wilshire considers these to be reasonable proxies for the Global Fixed Income and Global Equity asset classes, although some of the programs (currency overlay, RMARS, Corporate Governance, etc.) may not be perfectly captured. The single largest performance difference between these two asset classes occurred during the 3rd quarter of 2002 – the trough of the post-internet bubble bear market. Bonds returned 9.5% during that quarter, while stocks lost 18.2% - a difference of 27.7%. A 5% overweight to bonds would have added about 50 basis points of relative performance during that quarter, while a 5% underweight to equities would have added about 90 basis points of relative performance – a cumulative addition of 1.4%, solely due to active asset allocation. However, the performance would have been similarly negative if the positions had been reversed.

Interestingly, having been 5% overweight to equities and 5% underweight to bonds during this 20 year period would have had an average quarterly performance effect of 2

basis points. This would imply that, on average, allowing out-of-balance allocations to remain out-of-balance is not a value-adding strategy. Numerous studies have shown that rebalancing when actual weight drift from target weights add small amounts of value by, in effect, forcing an investor to “buy low” and “sell high.”

It is also worth noting that the tracking error created by the active asset allocation decision and the tracking error created by non-index fund implementations across the PERF are unlikely to simply be additive. Since the underlying drivers of tracking error are different, it is possible that the tracking error from any active asset allocation decision would be complementary to other sources of tracking error. Put another way, actively managing the asset allocation could provide diversification benefits to the PERF.

In our experience, external “Tactical Asset Allocation” managers, who claim to be able to add value through market timing and timely shifting among asset classes, have had a decidedly mixed-to-poor history. While we do not dismiss Staff’s efforts to effectively manage the asset allocation out of hand, we remain somewhat skeptical that any investor can do so with a consistent level of value-added. As a result, we recommend that the Investment Committee require Staff to report on a regular basis the success / failure of this strategy, and then re-assess at some point in the future whether this approach should continue or whether the current strategy of rebalancing to (near) target should be re-instated.

One last risk control that Staff has added to this revision is the 5% movement limit in any single quarter. Since that 5% represents $\frac{1}{2}$ of the tolerance band for both Global Equity and Global Fixed Income, Staff cannot move from a max underweight or overweight position to the opposite position at a moment’s notice. Wilshire believes that this cap on capital movement will force Staff and any outside manager to look for long-term mis-pricings between equities and fixed income, rather than using short-term trading strategies in an effort to time the market.

In the end, Staff currently has the ability to actively manage the asset allocation by deciding whether or not to rebalance out-of-balance asset classes. The current policy allows Staff to maintain any market-induced overweights or underweights by rebalancing to the tolerance limit. The requested change would permit them the ability to move from underweight to overweight positions, rather than simply moving back to the target allocations.

The revised Policy also indicates that “decisions concerning asset class active weights shall be determined in consideration of capital market views, relevant asset class characteristics, transaction costs, liquidity, and risks subject to this Policy and all other applicable policies.” While not specifically mentioned, Wilshire recommends that Staff develop, test, and implement a model that would evaluate the relative attractiveness of the global equity markets and the global bond markets to build in some objectivity to the decision-making process.

Conclusion

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Wilshire has analyzed the proposed revisions to the Asset Allocation Strategy Policy. The target asset class weights reflect the asset allocation selected by the Investment Committee at the Asset Allocation Workshop. Staff is requesting slightly more flexibility in actively managing the asset allocation of the PERF. Wilshire has worked with Staff to build in appropriate risk controls to this flexibility. Wilshire recommends that the Policy Subcommittee adopt this revised policy, and require Staff to periodically report back to the Investment Committee on its success or failure.

Should you require anything further or have any questions, please do not hesitate to contact us.

Best regards,

A handwritten signature in black ink, appearing to read "Ann Jinn". The signature is fluid and cursive, with a large loop at the end.